

Gas Actuated Thermometers

Process Industry Series • Model 73

Thermometers

Service intended

All stainless steel thermometer. Suitable for corrosive media and environments in chemical process, petroleum and food industry. The instruments meet the highest standards of measurement technique.

Nominal size

100 and 160 mm

Temperature element

Inert gas expansion system (non-toxic)

Accuracy

Class 1 per DIN EN 13 190

Working range

Permanent (1 year): measuring range per DIN EN 13 190
 Short time (24 h max.): scale range per DIN EN 13 190

Pressure rating of stem

25 bar maximum

Nominal use

DIN EN 13 190

Ingress protection

IP 56 / IP 65 per EN 60 529 / IEC 529
 IP 65 per EN 60 529 / IEC 529 for gauges with alarm contacts

Standard features

Location of stem

Centre back or radial bottom

Case material

Stainless steel

Bezel

Cam ring (bayonet type) bezel, natural finish stainless steel

Connection

G ½ B, stainless steel 1.4571

Stem

8 mm diameter, stainless steel 1.4571
 The active length of the stem depends upon the diameter and the scale range.

Dial

White aluminium with black lettering per DIN EN 13 190

Pointer

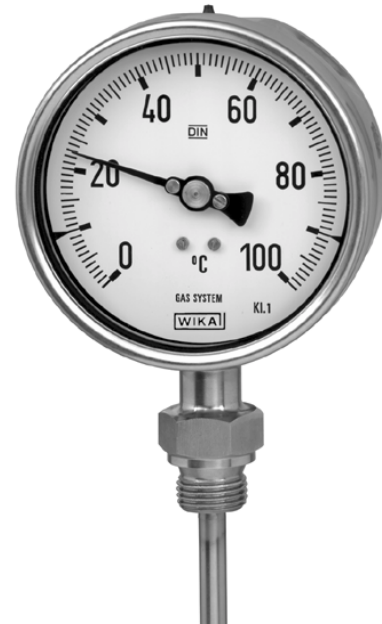
Adjustable black aluminium pointer

Window

Laminated safety glass

Optional extras

- Liquid damping
- Ingress protection IP 66 (not for gauges with alarm contacts)
- Scale °F, K; dual scale °C/°F
- Window of non-splintering plastic
- Radial connection other than bottom
- Stem 6, 10 or 12 mm diameter
- Plain stem or thread other than G ½ B
- Thermowells per DIN 43 772 or to user specifications
- Alarm contacts (see data sheet AC 08.01)



Scale, measuring ranges¹⁾, limits of error per DIN EN 13 190, class 1

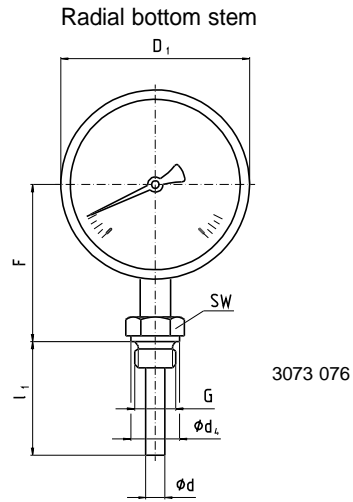
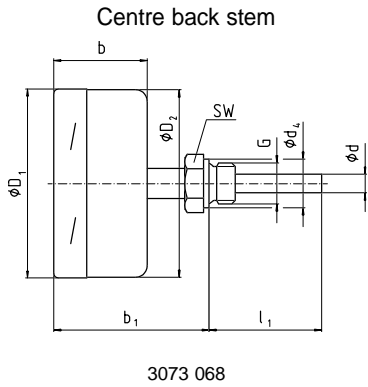
Scale range °C	Scale spacing °C	Measuring range ¹⁾ °C	Limit of error °C
- 80 ... + 60	2	- 60 ... + 40	2
- 60 ... + 40	1	- 50 ... + 30	1
- 40 ... + 60		- 30 ... + 50	
- 30 ... + 50		- 20 ... + 40	
- 20 ... + 60		- 10 ... + 50	
- 20 ... + 80		- 10 ... + 70	
0 ... 60		+10 ... + 50	
0 ... 80	+10 ... + 70	2	
0 ... 100	+10 ... + 90		
0 ... 120	+10 ... + 110		
0 ... 160	+ 20 ... + 140		
0 ... 200	2	+ 20 ... + 180	2.5
0 ... 250		+ 30 ... + 220	
0 ... 300		+ 30 ... + 270	
0 ... 400	5	+ 50 ... + 350	5
0 ... 500		+ 50 ... + 450	
0 ... 600		+100 ... + 500	
0 ... 700	10	+100 ... + 600	10

Models

Model	Nominal size	Location of stem
A 7300	100	Centre back
A 7301	160	
R 7302	100	Radial bottom
R 7303	160	

1) The measuring range is indicated on the dial by two triangular marks. Within this range the stated limit of error is valid according to DIN EN 13 190.

Dimensions



Nominal size	Dimensions in mm													Weight in kg
	alarm contacts of model 811, 821 or 831						d	d ₄	D ₁	D ₂	F ¹⁾	G	SW	
	without	1 or 2		3										
b	b ₁ ¹⁾	b	b ₁ ¹⁾	b	b ₁ ¹⁾	d	d ₄	D ₁	D ₂	F ¹⁾	G	SW		
100	50	83	88	121	—	8 ²⁾	26	101	99	83	G ½ B	27	1.100	
160					96			129	161	159			113	1.400

1) 40 mm wider with scale ranges $\geq 0 \dots 500 \text{ }^\circ\text{C}$

2) Option: stem diameter 6, 10, 12 mm

Design of connection

Standard connection

Male thread G ½ B, G ¾ B, ½ NPT or ¾ NPT
Length of stem $l_1 = 63, 100, 160, 200$ or 250 mm
Stainless steel 1.4571

Connection 1

Plain stem
Length of stem $l = 140, 200, 240$ or 290 mm
Stainless steel 1.4571
To suit compression fitting of connection 4

Connection 2

Male nut G ½ B
Length of stem $l_1 = 80, 140, 180$ or 230 mm
Stainless steel 1.4571

Connection 3

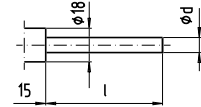
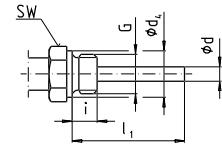
Union nut G ½, G ¾ or M 24 x 1.5
Length of stem $l_1 = 89, 126, 186, 226$ or 276 mm
Stainless steel 1.4571

Connection 4

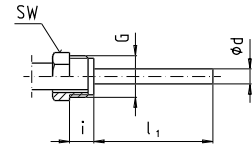
Compression fitting (sliding on stem)
G ½ B, G ¾ B, M 18 x 1.5, ½ NPT or ¾ NPT
Minimum insertion length l_{\min} approx. 60 mm, $d_{\min} = \varnothing 8$ mm
Length of stem $l_1 = \text{variable}$
Length $L = l_1 + 40$ mm
Stainless steel 1.4571

Dimensions in mm

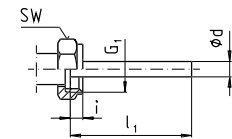
Male thread G	SW	d ₄	i
G ½ B	27	26	14
G ¾ B	32	32	16
½ NPT	22	—	19
¾ NPT	30	—	20



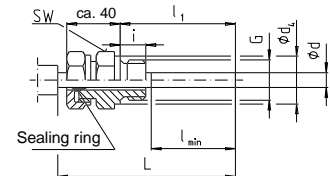
Male thread G	SW	i
G ½ B	27	20



Female thread G ₁	SW	i
G ½	27	8.5
G ¾	32	10.5
M 24 x 1.5	32	13.5



Male thread G	SW	d ₄	i
G ½ B	27	26	14
G ¾ B	32	32	16
M 18 x 1.5	24	23	12
½ NPT	22	—	19
¾ NPT	30	—	20



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Ordering information

Model / Nominal size / Scale range / Design and size of connection / Location and length of stem l, l_1 / Optional extras required

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.



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